

Cookbook of Activities for Driver Education

MT CURRICULUM GUIDE

M 9

Objective: Demonstrate the Effect Of Gravity

INGREDIENTS

1. 2 small plastic containers such as a film canister
2. a ruler
3. a yardstick
4. tape
5. rubber bands
6. 1/24" scale model car



INSTRUCTIONS

Part 1

Tape the ruler at the top of the desk.

Place the car on the desk, with the left tires resting against the ruler.

Tilt the desk until the car rolls over the ruler.

Measure and record how far the desk was lifted off the floor before the car rolled off.

Part 2

Secure an empty container to the top of the car with rubber bands and repeat Part 1.

Part 3

Secure a water-filled container to the top of the car and repeat Part 1.

Have the students compare measurements and explain the differences. (Measurement for Part 1 should be the greatest, Part 2 less than Part 1, and Part 3 less than Part 2)

The Center of Gravity was gradually raised with the addition of the container.

Discuss how this affects car loading, and what occurs when the car is turning when the center of gravity is raised.

A vehicle with a high center of gravity is more likely to roll than a vehicle with a low center of gravity.

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Objective: Changing the Center Of Gravity

INGREDIENTS

Pencil

Paperclip

INSTRUCTIONS

Instruct students to balance a pencil on their index finger.

- The first time do it with the eraser end up.

- The second time do it with the eraser end down.

Ask: Which position had the lower center of gravity?

Instruct student to place a paper clip on the pointed end of the pencil and again balance it on their index finger.

Ask: How did the center of gravity change?